



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,522	01/27/2004	Tseng Shiang-Chieh	A3-296 US	1020

23683 7590 12/29/2004

MOLEX INCORPORATED
2222 WELLINGTON COURT
LISLE, IL 60532

EXAMINER

DUONG, THO V

ART UNIT	PAPER NUMBER
----------	--------------

3743

DATE MAILED: 12/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/765,522

Applicant(s)

SHIANG-CHICH, TSENG

Examiner

Tho v Duong

Art Unit

3743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-8 is/are rejected.
- 7) ☒ Claim(s) 5 and 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: on page 3, line 13, "12encloses" should be "12 encloses".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,2 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Hatada et al. (US 5,077,601). Hatada discloses (figures 1,7,8,15 and 16) a heat dissipating device comprising a heat sink capable of being disposed on the electrical components; a fan adapter (1) including two opposing sidewalls straight arranged thereof, a top wall disposed horizontally and connecting two side walls, an inlet (4) formed in a front thereof, an oblique reduce cross-sectional area portion (1b) extending backwardly from a rear thereof, and an outlet formed in a rear of the oblique reduced cross-sectional area portion(1b), wherein the fan adapter (1) encloses the heat sink; and a fan (19) located at the inlet of the fan adapter; the heat sink has a base (22) and a plurality of fins (3) arranged on the base, wherein each of the fin (3) has a rear aligns with a rear edge of the base (22).

Claim Rejections - 35 USC § 103

Art Unit: 3743

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson (4,953,634) in view of Bollesen (US 6,304,445). Nelson discloses (figures 1-5) a heat dissipation device comprising a heat sink (22,32) capable of being disposed on electrical components; a fan adapter including two opposing side walls straight arranged thereof, a top wall (26) disposed horizontally and connecting the two side walls, an inlet formed in a front thereof, the fan adapter encloses the heat sink; the heat sink has an inlet formed in a front thereof and an outlet formed in a rear thereof, fins (32) are arranged between the inlet and the outlet of the heat sink; an oblique reduced cross-sectional area portion (20C) extending backwardly from a rear thereof, and an outlet formed in a rear of the oblique reduced cross-sectional area portion, wherein the fan adapter encloses the heat sink; the heat sink has a base (22b) and the plurality of fins (32) arranged on the base, wherein the fins has a rear aligning with a rear edge of the base. Nelson does not disclose a removable fan adapter screwed in the heat sink with a proper distance provided in the front for locating a fan. Regarding claims 3 and 7, Bollesen discloses (figure 15) a heat sink structure (200) having a base provided with a proper distance at the front of the heat sink, wherein a fan (220) located on the proper distance and being screwed through four holes (304) located on the fan adapter for the purpose of removably attaching the fan onto the fan adapter in order to force air flowing horizontally into the heat sink. Since Nelson and Bollesen are both from the same field of endeavor and/or analogous art, it would have been obvious to one

Art Unit: 3743

having ordinary skill in the art at the time the invention was made to use Bollesen's teaching in Nelson's heat dissipation device for the purpose of removably attaching the fan onto the fan adapter in order to force air flowing horizontally into the heat sink. Regarding claim 8, Bollesen further discloses (figure 15) that the fan adapter is screwed to secure to the heat sink through screws (1506) for the purpose of removably attaching the fan adapter onto the heat sink, which will ease the cleaning or repairing process of the heat sink if desired. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Bollesen's teaching Nelson's heat dissipation device for the purpose of removably attaching the fan adapter onto the heat sink, which will ease the cleaning or repairing process of the heat sink if desired.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson and Bollesen as applied to claim 1 above, and further in view of Lo (US 6,459,583). Nelson and Bollesen substantially disclose all of applicant's claimed invention as discussed above except for the limitation the heat sink has two proper distances formed on the base for resilient pressing the heat sink onto the electrical components. Lo discloses (figures 1,3 and column 1, lines 35-42) a heat sink mounted on top of electronic components, which disposed on a circuit board (80) including a seat (70) and wherein the heat sink has two proper distances (24) formed on a base (20) from two lateral sides of the base and two buckling devices (14) securing two opposing sides of the seat and pressing the heat sink onto the heat electronic components for the purpose of facilitating the assembly of the heat dissipating assembly so that the packaging and transportation of the assembly is reduced. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Lo's teaching in the combination device

Art Unit: 3743

of Nelson and Bollesen for the purpose of facilitating the assembly of the heat dissipating assembly so that the packaging and transportation of the assembly is reduced.

Allowable Subject Matter

Claims 5 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Chung et al. (US 6711016) discloses a side exhaust heat-dissipating module.

Rees et al. (US 5,810,072) discloses a forced air cooler system.

Novotny et al. (US 6,438,984) discloses a refrigerant cooled system and method for cooling electronic components.

Grahams (GB 2,296,132A) discloses a cooling electrical apparatus.

Malone et al. (US 20030155106A1) discloses a heat sink apparatus with air duct.

Chung et al. (US 20030202327A) discloses a heat dissipation module.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tho v Duong whose telephone number is 571-272-4793. The examiner can normally be reached on M-F (first Friday off).

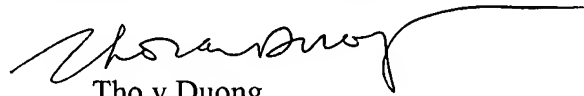
Art Unit: 3743

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Bennet can be reached on 571-272-4791. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



TD
December 14, 2004



Tho v Duong
Examiner
Art Unit 3743